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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,346	05/07/2001	Fabian Edgar Ernst	PHNL 000275	2300

24737 7590 06/04/2004
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/850,346

Applicant(s)

ERNST ET AL.

Examiner

Erick Rekstad

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The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

This is a first action for application no. 09/850346 filed on May 07, 2001 in which claims 1-10 are presented for examination.

Specification

The disclosure is objected to because of the following informalities: There are no headings for the sections of the disclosure (Background of the Invention, Summary of the Invention, Brief Description of the Drawings, etc.).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by "Adaptive multiple-candidate hierarchical search for block matching algorithm" to Chan Y.-L. et al. [claim 1]

As shown on page 1638 under "Proposed algorithm", Chan teaches a method of choosing an optimal candidate value to be used for matching a block from a first image with an area from a second image, the method comprising:

Making a set of candidate values for determining an area to be matched from the second image,

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For each candidate value from the set, determining an area to be matched from the second image, based on said candidate value, matching the block from the first image with this area and calculating a matching error, and

Choosing the optimal candidate value from the set based on the calculated matching errors,

Characterized in that the steps a, b and c are repeated when, as a consequence of a change of the value of the chosen optimal candidate value, a rise of the attendant matching error satisfies a predetermined criterion (Page 1638 from Proposed algorithm to Result).

[claim 2]

Chan teaches the method of claim 1, characterized in that the predetermined criterion is a percentage of the matching error of the chosen optimal candidate value (Page 1638 Second Paragraph).

[claims 3 and 4]

Chan teaches the adjusting of the threshold in order to find the global minimum versus the prior art that tended to get such in local minimum. The threshold (GT) is increased when the mean absolute difference is high and the threshold is decreased when the mean absolute difference is low. The location with the smallest difference is designated as the central location for the next search as required by claim 4 (Page 1638, Fig. 1).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan as applied to claim 1-4 above, and further in view of US Patent 5,473,379 to Horne.

[claims 5-9]

Chan teaches the method of choosing an optimal candidate value to be used for matching a block from a first image with an area from a second image as shown above for claims 1-4. Chan teaches block motion estimation algorithms have been widely used in video coding standards such as H.261 and MPEG (Page 1637 "Introduction"). Chan does not teach the system or apparatus for the method of claims 1-4. Horne teaches a system and apparatus for block based motion compensation for digital video compression such as MPEG1 or MPEG2 (Col 3 Lines 59-67, Col 4 Lines 1-26). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Chan in the MPEG encoding system of Horne in order to provide an MPEG encoder that provides a motion estimation method that finds an optimal motion vector.

[claim 10]

Chan teaches the method of block based motion estimation for coding standards such as MPEG2. Horne teaches the system and apparatus for MPEG encoding.

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Neither Chan nor Horne teaches the apparatus connected to a display for viewing of the video. It is well known in the art to take encoded video (MPEG2) and decode the video for use on a display (Official Notice). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Chan and Horne with a display such as a HDTV, DVD, or VCD system connected to a Television.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner
AU 2613


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